

Applicant(s): John Mansbridge

Serial No.: 09/494,053

Group Art Unit: 2634

Examiner: Ahn, Sam K.

Title: DATA FILTERING APPARATUS AND METHOD OF FILTERING A PLURALITY OF DATA SIGNALS

In the Claims:

Claims 1-9 (canceled).

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10. (new) A data filtering apparatus having means to input a radio frequency signal, means to convert said radio frequency signal to a plurality of data signals, processing means comprising a photodiode array processing unit arranged to identify at least one data signal from the plurality of data signals conforming to a predetermined criteria and transmit an identifying signal corresponding to the identified at least one data signal to a multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

11. (new) An apparatus as claimed in Claim 10, wherein the processing means comprises level detection means arranged to determine whether each of the plurality of data signals is above a predetermined threshold.

12. (new) An apparatus as claimed in Claim 11, wherein the level detection means is an array of comparator means.

13. (new) An apparatus as claimed in Claim 10, wherein the processing means includes means for receiving an external control signal.

14. (new) An apparatus as claimed in Claim 11, wherein the processing means includes means for receiving an external control signal.

15. (new) An apparatus as claimed in Claim 12, wherein the processing means includes means for receiving an external control signal.

16. (new) An apparatus as claimed in Claim 13, wherein the external control signal is an instruction relating to the selective processing of the plurality of data signals.

17. (new) A channel selection logic unit for a multiplexing unit including a data filtering apparatus as claimed in Claim 10, the logic unit comprising:

an input port for receiving a plurality of data signals,

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a processing unit including a plurality of level detectors coupled to the input port and arranged to determine whether each of the plurality of data signals is above a predetermined threshold, and generate an identifying signal indicative of each of the plurality of data signals being above the predetermined threshold, and

an output port for coupling to the multiplexing unit in order to transmit the identified at least one data signal to the multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

18. (new) A channel selection logic unit for a multiplexing unit including a data filtering apparatus as claimed in Claim 11, the logic unit comprising:

an input port for receiving a plurality of data signals,

a processing unit including a plurality of level detectors coupled to the input port and arranged to determine whether each of the plurality of data signals is above a predetermined threshold, and generate an identifying signal indicative of each of the plurality of data signals being above the predetermined threshold, and

an output port for coupling to the multiplexing unit in order to transmit the identified at least one data signal to the multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

19. (new) A channel selection logic unit for a multiplexing unit including a data filtering apparatus as claimed in Claim 12, the logic unit comprising:

an input port for receiving a plurality of data signals,

a processing unit including a plurality of level detectors coupled to the input port and arranged to determine whether each of the plurality of data signals is above a predetermined threshold, and generate an identifying signal indicative of each of the plurality of data signals being above the predetermined threshold, and

an output port for coupling to the multiplexing unit in order to transmit the identified at least one data signal to the multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

20. (new) A channel selection logic unit for a multiplexing unit including a data

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filtering apparatus as claimed in Claim 13, the logic unit comprising:

an input port for receiving a plurality of data signals,

a processing unit including a plurality of level detectors coupled to the input port and arranged to determine whether each of the plurality of data signals is above a predetermined threshold, and generate an identifying signal indicative of each of the plurality of data signals being above the predetermined threshold, and

an output port for coupling to the multiplexing unit in order to transmit the identified at least one data signal to the multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

21. (new) A channel selection logic unit for a multiplexing unit including a data filtering apparatus as claimed in Claim 14, the logic unit comprising:

an input port for receiving a plurality of data signals,

a processing unit including a plurality of level detectors coupled to the input port and arranged to determine whether each of the plurality of data signals is above a predetermined threshold, and generate an identifying signal indicative of each of the plurality of data signals being above the predetermined threshold, and

an output port for coupling to the multiplexing unit in order to transmit the identified at least one data signal to the multiplexing unit for selective processing of the at least one data signal from the plurality of data signals.

22. (new) A method of filtering a radio frequency signal comprising: converting said signal to a plurality of data signals; processing the plurality of data signals and

identifying at least one data signal from the plurality of data signals conforming to a predetermined criteria and generating an identifying signal,

transmitting the identifying signal corresponding to the identified at least one data signal to a multiplexer for selective processing of the at least one data signal from the plurality of data signals.

23. (new) A method as claimed in Claim 22, further comprising identifying the

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at least one data signal from the plurality of data signals conforming to the predetermined criteria by determining whether each of the plurality of data signals is above a predetermined threshold.
